

Title (en)

Liquid crystal display device and liquid crystal substance therefor.

Title (de)

Flüssigkristallanzeige und Materialien dafür.

Title (fr)

Affichage à cristaux liquides et substance pour celui-ci.

Publication

EP 0568246 A1 19931103 (EN)

Application

EP 93303033 A 19930420

Priority

JP 10752992 A 19920427

Abstract (en)

Anti-ferroelectric liquid crystal substances which are represented by the formula (1): <CHEM> wherein R is a straight chain alkyl group having 6 to 10 carbon atoms, X is hydrogen or fluorine atom, Z is -CH₃, -CF₃ or -C₂H₅, and C @ stands for an asymmetric carbon atom, and l, m, and n are 0 or a certain integer depending on the specific kinds of X and Z, and the use of the substances for liquid crystal display devices.

IPC 1-7

C09K 19/02; **C09K 19/34**; **C07D 239/28**

IPC 8 full level

C07D 239/28 (2006.01); **C09K 19/02** (2006.01); **C09K 19/34** (2006.01)

CPC (source: EP US)

C07D 239/28 (2013.01 - EP US); **C09K 19/0266** (2013.01 - EP US); **C09K 19/3463** (2013.01 - EP US)

Citation (search report)

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- [Y] US 4921632 A 19900501 - NAKAMURA TOYOKAZU [JP], et al
- [X] Database WPI, Derwent Publications Ltd., London, GB; AN 92-085891; & JP-A-04 029 978 (MITSUBISHI PETROCHEM.) 13 January 1992, Abstract.
- [X] Database WPI, Derwent Publications Ltd., London, GB; AN 87-224864; & JP-A-62 149 669 (TORAY IND INC) 3 July 1987, Abstract.
- [X] PATENT ABSTRACTS OF JAPAN, Vol. 016, No. 234 (C-945) 29 May 1992; & JP-A-04 046 158 (MITSUBISHI PETROCHEM CO) 17 February 1992, Abstract.
- [Y] Japanese Journal of Applied Physics, Vol. 29, No. 6/2, June 1990, Tokyo, JP, pages L987-L990; S. INUI: "First order paraelectric-antiferroelectric phase transition in a chiral smectic liquid crystal of a fluorine containing phenyl pyrimidine derivative".
- [Y] Japanese Journal of Applied Physics, Vol. 30, No. 6A, 1 June 1991, Tokyo, JP, pages L1032-L1035; A. IKEDA: "Influence of the optical purity on the smectic layer thickness and the transition order in enantiomeric mixtures of an antiferroelectric liquid crystal".

Designated contracting state (EPC)

DE FR GB

DOCDB simple family (publication)

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DOCDB simple family (application)

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